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# Diagnostic Testing: ECG Exercise and Sports

## IS THERE AN ALTERNATIVE EXPLANATION TO POST-MI EMERGENCE OF MITRAL REGURGITATION; A CMR-LGE OBSERVATIONAL STUDY

ACC Moderated Poster Contributions
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Abstract Category: 10. Valvular Heart Disease: Clinical
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**Introduction:** Post-MI mitral regurgitation (MR) is generally thought to be due to passive rather than active ventricular and annular remodeling. Standard CMR late gadolinium enhancement (LGE) may be sensitive to non-myocardial pathology explaining emergence of post-MI MR.

**Hypothesis:** LGE may detect MVE (mitral valve enhancement) in post-MI patients. The incidence of MR may correlate with presence of MVE.

**Methods:** Presence or absence of MVE was noted in LGE studies of MI and non-MI indications. Chi square analysis was performed for non-contiguous variables.

**Results:** Patients (87; M=54, F=33) underwent 115 LGE-CMR studies (1.5T GE, Milwaukee, WI) with 0.2mmol/kg of Magnevist (Berlex, Wayne, NJ) or 0.1mmol/kg MultiHance. LGE+ (present) in 95 and LGE- (absent) in 20 studies. Post-MI patterns were: LGE+ in 73 and LGE- in 42 pts. MVE+ in 54, MVE- in 61. MR+ present in 89 and MR- in 26 studies. The MVE+ was observed chiefly in post-MI pts (47 of 73; 63%) and infrequently in non-post-MI pts (7 of 42; 17%); $\chi 2 = 22$, $p<0.001$. Further, in post-MI pts with MR, MVE was much more frequent (42 vs. 22) whereas in non-post MI with MR, MVE was less frequent (5 vs. 20); $\chi 2= 13$, $p<0.001$.

**Conclusion:** MVE is present in a large number of post-MI patients but rarely in non-post-MI patients. Post-MI patients with MVE rather than without MVE were far more likely to have MR. These observations suggest a specific, as yet unkown reactive process may contribute to mitral leaflet/annular remodeling and thus potentiation of MR in post-MI patients.